REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on November 21, 2002, and the references cited therewith.

Claims 2, 4-6, 10-12, 14, 29, 32-35, 38, 51, 52, and 76 are amended, as a result, claims 2-6, 10-18, 29-38, 50-52, 76, and 77 remain pending in this application.

§112 Rejection of the Claims

Claims 2-6, 14, 32 and 51 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 2 and 32 are amended similarly to the previous amendment of claim 76.

Claim 4 is amended to recite that forming the "conductive layer" (not the second capacitor plate) comprises depositing a material to form this conductive layer.

Claim 14 is amended to recite that a non-portion of the metal layer and the first conductive layer form a conductive plate.

In view of the amendment to the claims above, Applicant respectfully requests that the rejection of claims 2-6, 14, and 32 be reconsidered and withdrawn.

1.75(c) Rejection of the Claims

Claim 51 was objected to under 37 CFR 1.75(c) as being of improper dependent form failing to further limit the subject matter of a previous claim.

Claim 51 is amended to be dependent from claim 38. In light of the amendment to claim 51, Applicant requests that the rejection of claim 51 be reconsidered and withdrawn.

§102 Rejection of the Claims

Claims 10, 11, 13, 14, 15, 29, and 30 were rejected under 35 USC § 102(e) as being anticipated by Hayakawa et al. (U.S. Patent No. 5,685,968).

Independent claims 10, 11, and 29 are amended to include element "the conductive layer having portions electrically isolated from one another".

Hayakawa et al. disclose a conductive layer in which the conductive layer is one continuous layer. Hayakawa et al. do not disclose a conductive layer in which the conductive layer has portions electrically isolated from one another. Thus, independent claims 10, 11, and

29, as amended, are not anticipated by Hayakawa et al. Applicant requests that the rejection of these independent claims be reconsidered and withdrawn and that these independent claims and their dependant claims be allowed.

§103 Rejection of the Claims

Kashihara et al. in combination with Gaulier and Hayakawa et al.

Claims 2-6, 32, 37, 38, 50, 51, 76 and 77 were rejected under 35 USC § 103(a) as being unpatentable over Kashihara et al. (U.S. Patent No. 5,382,817) in combination with Gaulier (U.S. Patent No. 4,450,048) and Hayakawa et al.

Applicant's claimed invention includes a conductive layer, and a metal layer formed over the conductive layer. An oxide is formed by oxidizing a portion of the metal layer. Thus, the oxide of Applicant's claimed invention is not formed from the conductive layer but formed from a metal layer different from the conductive layer. Forming the oxide from a metal layer different from a conductive layer allows options for choosing materials other than the only material of the conductive layer.

Analysis of the Kashihara et al. patent

Kashihara et al. disclose a number of capacitors having different structures. Each of the capacitors has a lower plate, a top plate, and a dielectric between the lower plate and the top plate. Kashihara et al. do not disclose or suggest oxidizing a metal layer to form the dielectric. Further, Kashihara et al. have no motivation for oxidizing a metal layer to form the dielectric because Kashihara et al. disclose forming a capacitor having a planarized lower plate to improve pressure-resistance and leakage-resistance of the capacitor. Moreover, Kashihara et al. do not disclose or suggest anything about anodic oxidation.

Analysis of the Gaulier patent

Gaulier discloses a capacitor having a lower plate, a top plate, and an oxide between the lower plate and the top plate. The oxide is formed by oxidizing a portion of the lower plate. FIG. 2 of Gaulier shows a lower plate 5 and an oxide 9 in which oxide 9 is formed by oxidizing lower plate 5. Thus, in Gaulier, the oxide and the lower plate are formed from the same plate of the same material. Gaulier does not disclose or suggest an oxide formed by oxidizing a metal layer in which the metal layer is different from a conductive layer.

Gaulier uses an anodic oxidation step to form the oxide of the capacitor. Gaulier discloses that using anodic oxidation step solves several problems facing a prior art method of forming capacitors. Gaulier discloses some problems of the prior art in a passage in column 2, lines 33-50. In this passage, Gaulier discloses that in the prior art capacitors, pressure may produce a short between the capacitors and that a supplementary layer formed to prevent the short requires an additional photo-etching step; this step increases complexity of the method. In col. 3 lines 26-40, Gaulier states that the anodic oxidation step eliminates the supplementary deposition step, or the photo-etching step, or both, and that the anodic oxidation step protects an island between capacitors to prevent the short between the capacitors. Thus, the anodic oxidation step of Gaulier has nothing related to oxidizing a metal layer to form an oxide in which the metal layer is different from a conductive layer.

Based on the differences between the structure of the capacitor of Gaulier and the structure of the capacitor of Applicant, and based on the purpose of the anodic oxidation step of Gaulier, there is no reason or motivation for Gaulier to form an oxide from a metal layer in which the metal layer is different from a conductive layer.

Analysis of the Hayakawa et al. patent

Hayakawa et al. disclose a capacitor having a lower plate, a top plate, and an oxide between the lower plate and the top plate. Similarly to Gaulier, the oxide of Hayakawa et al. is formed by oxidizing a portion of the lower plate. FIG. 4 of Hayakawa et al shows a lower plate 5a and an oxide 6a in which oxide 6a is formed by oxidizing lower plate 5a. Thus, in Hayakawa et al, the oxide and the lower plate are formed from the same plate of the same material. Hayakawa et al do not disclose or suggest an oxide formed by oxidizing a metal layer in which the metal layer is different a conductive layer.

Analysis of the combination of Kashihara et al., Gaulier, and Hayakawa et al. patents

Kashihara et al. do not disclose or suggest forming the oxide from a metal layer in which the metal layer is different from a conductive layer. Gaulier also does not disclose or suggest forming the oxide from a metal layer in which the metal layer different from a conductive layer. Further, Gaulier uses the anodic oxidation step to solve a problem unrelated to Applicant's claimed invention. The oxide of Hayakawa et al. is formed from a plate that is the same as the

capacitor plate. Hayakawa et al also do not disclose or suggest a method of forming an oxide from a metal layer in which the metal layer is different from a conductive layer.

Thus, none of the combination of Kashihara et al., Gaulier, and Hayakawa et al. references discloses or suggests forming the oxide from a metal layer in which the metal layer is different from a conductive layer. Since none of the combination of the Kashihara et al., Gaulier, and Hayakawa et al. references discloses or suggests Applicant's claimed invention, there is no reason or motivation to combine these references. Applicant requests that the rejection of claims 2-6, 32, 37, 38, 50, 51, 76 and 77 be reconsidered and withdrawn and that these claims be allowed.

Kashihara et al. in combination with Gaulier, Hayakawa et al., and Dickey et al.

Claims 16,17 and 18 were rejected under 35 USC § 103(a) as being unpatentable over Kashihara et al. in combination with Gaulier and Hayakawa et al. as applied to claims 2-6, 32, 37, 38, 50, 51, 76 and 77 above, and further in view of Dickey et al.(U.S. Patent No. 4,936,957).

Claims 16, 17, and 18 depend indirectly from independent claim 11. Based on reason similar to the reason discussed above regarding claims 2-6, 32, 37, 38, 50, 51, 76 and 77, none of the combination of Kashihara et al., Gaulier, and Hayakawa et al. discloses or suggests Applicant's claimed invention as claimed in claim 11. Further, none of the combination of Kashihara et al., Gaulier, Hayakawa et al., and Dickey et al. discloses or suggests Applicant's claimed invention as claimed in claim 11. Thus, claim 11 is patentable. Since claims 16, 17, and 18 depend from claim 11, claims 16, 17, and 18 are also patentable. Applicant requests that the rejection of claims 16, 17, and 18 be reconsidered and withdrawn and that these claims be allowed.

Kashihara et al. in combination with Gaulier, Hayakawa et al., and Jones Jr. et al.

Claim 12 was rejected under 35 USC § 103(a) as being unpatentable over Kashihara et al. in combination with Gaulier and Hayakawa et al. as applied to claims 2-6, 32, 37, 38, 50, 51, 76 and 77 above, and further in view of Jones Jr. et al. (U.S. Patent No. 5,696,394).

Claim 12 depends from independent claim 11. Based on reason similar to the reason discussed above regarding claims 2-6, 32, 37, 38, 50, 51, 76 and 77, none of the combination of Kashihara et al., Gaulier, and Hayakawa et al. discloses or suggests Applicant's claimed invention as claimed in claim 11. Further, none of the combination of Kashihara et al., Gaulier,

Hayakawa et al., and Jones Jr. et al. et al. discloses or suggests Applicant's claimed invention as claimed in claim 11. Thus, claim 11 is patentable. Since claim 12 depends from claim 11, claim 12 is also patentable. Applicant requests that the rejection of claim 12 be reconsidered and withdrawn and that claim 12 be allowed.

Allowable Subject Matter

Claims 34-36 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 34-36 depend from claim 32. Based on the reason discussed above, claim 32 is allowable. Thus, claims 34-36 are also allowable. Applicant requests that claims 34-36 be allowed.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's representative at (612) 373-6969 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date 2-21-03

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 21 day of February, 2003.

Tina Kdrost
Name

Signature